

## **EXHIBIT 7**

Message

**From:** Neal Knuth [n.knuth@samsung.com]  
**Sent:** 6/11/2021 11:40:11 AM  
**To:** Harrison Yoo [hsang.yoo@samsung.com]  
**CC:** Daniel (Kyong Yong) Lee-mySingle [ky1217.lee@samsung.com]  
**Subject:** Presentation file  
**Attachments:** Netlist DSK Visit February 21, 2017.eml; Netlist DSK Visit February 21, 2017.eml; PPT(Netlist Meeting).eml

Attached is what I have.

Thanks,

Neal Knuth  
949 910 2835

**From:** 유혁상 [mailto:hsang.yoo@samsung.com]  
**Sent:** Thursday, June 10, 2021 4:53 PM  
**To:** Neal Knuth <n.knuth@samsung.com>  
**Cc:** Daniel (Kyong Yong) Lee-mySingle <ky1217.lee@samsung.com>  
**Subject:** Presentation file

Neal,  
Can you please try to find the presentation material which Netlist presented on Feb 2017 when they visited DSK with you?  
: their company introduction and business discussion

Regards

**Hyeoksang(Harrison) Yoo**  
**America Sales (Consumer & EDP)**

**Hyeoksang Yoo**

B2B Sales Management, Principal Professional  
Memory Sales Group 1  
Samsung Electronics

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U.S.D.C. CENTRAL DISTRICT OF CALIFORNIA	
CASE NO.	8:20-CV-993-MCS (ADS)
Netlist Inc.	
vs.	Samsung Electronics Co., Ltd.
PLAINTIFF'S EXHIBIT	0519
DATE	IDENT.
DATE	EVID.
BY	Deputy Clerk

U.S.D.C. CENTRAL DISTRICT OF CALIFORNIA	
CASE NO.	8:20-cv-00993-MCS (ADS)
Netlist Inc.	
vs.	Samsung Electronics Co., Ltd.
DEFENDANT'S EXHIBIT	519A
DATE	IDENT.
DATE	EVID.
BY	Deputy Clerk

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Exhibit 519A.0001

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## **Hyeoksang Yoo**

B2B Sales Management, Principal Professional  
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0519.3

Exhibit 519A.0003



Message

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**From:** Neal Knuth [n.knuth@samsung.com]  
**Sent:** 3/3/2017 12:34:08 AM  
**To:** Howard Sung [hwanam.sung@samsung.com]; Yejin Moon [yejin.moon@samsung.com]; Daniel (Kyong Yong) Lee-mySingle [ky1217.lee@samsung.com]; Harrison Yoo [hsang.yoo@samsung.com]  
**CC:** Steven Metz [s.metz@samsung.com]; Lane Kim [kihoon74.kim@samsung.com]; Rick (Chun Ching) Yeh [rick.yeh@samsung.com]; Tim Le [tim.le@samsung.com]; Michael (Sie Pook) Law [michael.law@samsung.com]; In Dong Kim [indong2.kim@samsung.com]  
**Subject:** Netlist DSK Visit February 21, 2017  
**Attachments:** Samsung 4PM 2-20.pdf; HybriDIMM Status Feb 21 v2.pdf

Attached are both presentations that Netlist presented. Can we please make sure the Technical Team in Korea gets the Hybrid DIMM update as attached.

Thanks for everyone hospitality and support during the meeting last week.

Thank you,  
감사합니다  
Neal Knuth  
Samsung Semiconductor, INC  
Southwest Regional Manager  
**New Office Number:** 949 910 2835

[nealk@ssi.samsung.com](mailto:nealk@ssi.samsung.com)

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**From:** Neal Knuth  
**Sent:** Tuesday, February 21, 2017 12:22 AM  
**To:** Howard Sung; Yejin Moon; Daniel (Kyong Yong) Lee-mySingle; Harrison Yoo  
**Cc:** Steven Metz; Lane Kim  
**Subject:** Netlist DSK Visit February 21, 2017

Howard,

Harrison just translated what was said on two key topics that were discussed in Korean. I edited below. Any other feedback?

Thanks,

Neal Knuth  
949 910 2835

---

**From:** Neal Knuth  
**Sent:** Monday, February 20, 2017 11:35 PM  
**To:** Howard Sung; Yejin Moon; Daniel (Kyong Yong) Lee-mySingle; Harrison Yoo  
**Cc:** Steven Metz; Lane Kim  
**Subject:** Netlist DSK Visit February 21, 2017

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Exhibit 519A.0004

Thanks Howard for the Samsung presentations.

I will send off to Netlist after we get their presentations (both Technical and Sales have been requested). Until I get, here are my first pass of notes without the overviews (it was difficult to read what was on the Netlist presentations). Also, as so much Korean was spoken for some topics, I hope someone can add to the below (including SEC attendees as both groups were quite large).

Please help distribute as needed within SEC after adding Team's comments or editing. (I did not copy DS).

#### **Sales Portion**

##### **Netlist Attendees:**

Paik Ki Hong VP WW Operations  
Brian Anderson VP Sales  
JB Kim VP Sales  
Sebastian Lee Director Engineering

##### **Samsung Attendees:**

Dong Sung Yang  
Daniel Lee  
Harrison Yoo  
Kate Moon  
Hyoungseok Kwon  
Jaehyung Park  
Younggyun Lee  
Neal Knuth

##### **Technical:**

Indong Kim  
Benjamin Lim  
KC Roo  
Kate Moon  
Neal Knuth

##### **Netlist Sales Overview (will attach when have)**

- Brain Peterson presented Netlist overview, discussing his responsibility on North America and EU sales while JB Kim handles Asia Pacific.
- Netlist described 17 years of DRAM development and invention, which includes over 100 patents in DRAM technology.
- Netlist was a pioneer in the development of DRAM, including patents on LRDIMM, VLP and NVDIMM.
- Discussed the JDLA signed with Samsung in November of 2015 which is active for 5 years.
- Hybrid DIMM announced publicly in August of 2016, expanding Netlist Patents.
- Discussed ITC litigation against SK Hynix. Trial to begin in May, with resolution by October 2017.
- Netlist first company to develop NV function in support of Dell.
- Hypercloud product was first LRIDMM in industry.
- Netlist Solutions and Offerings include a:
  - PCI Offering
  - NVDIMM
  - HyperDIMM

- These solutions and customer discussions lead naturally into Samsung Storage Solutions including DRAM and SSD (finished products) besides using components in their actual products above.
- Typical DRAM Netlist solutions consists of 18-36 x4 8Gb D4 components along with 10-20 256Gb/32GB eMMC.
- Netlist main revenue driver today is a PCI express card that is plug and play along with finished Samsung solutions. Offering mainly 8GB and 16GB today.
- NVDIMM market continues to be delayed, weak demand, competing solutions yet to be proven from companies like Smart and Micron.
- NV VAULT is Netlist brand of NVDIMM-P.
- With the JDLA, and strategic partnership, Samsung is the single largest investor in Netlist.
- One stop solution for Samsung customers with NV/EV along with Samsung Finished SSD and DRAM.
- There was a very long discussion of Uber in Korean, and DongSung Yang clearly stated our intention was to follow the customer direction, whatever channel that may be (Direct or through Netlist or others).
- Netlist positioned themselves as a Dedicated Sales Channel to Samsung vs. the Disti and Rep networks.
- Synergistic sales and dedicated to Samsung products.
- Netlist showed 2016 Samsung purchases to be 9M, over ½ in Q4 (~5M)
- Netlist showed a purchase forecast for 2017 of \$100M from Samsung (neither credit line or PA can support). DongSung was sure to point out anyone could achieve this in current market. This 100M was not broken out by customer, product, or sales strategy, seemed arbitrary forecast.

**At the end of Netlist presentation, these were the Asks from Netlist:**

1. Better product support and allocation to achieve 2017 goal.
2. Vendor Managed Inventory (VMI), this request was ignored obviously.
3. OEM Pricing
4. Referral of small customers to Netlist for support, stock, etc.
5. Official Distribution Partner Agreement, this became a heated topic as DongSung described our current structure. Netlist has brought this up in the past and all requests have been denied. This discussion also went on in Korean for a while. DongSung also let Netlist know that the JDLA is clearly focused on Technology, and is not an avenue to support Netlist with standard products. This should be separate and handled on the business not executive levels.

**Samsung Presented:**

- Flash Market Overview (as time was over, this was brief). Jaehyung Park
- DRAM Market Overview Younggyun Lee
- 32GB price discussion ended the meeting.

Lunch at Japanese Restaurant.

**Prior Meeting was Technical Update for progress of NVDIMM (will attach Netlist presentation when available)**

**Key Takeaways:**

- Need JEDEC standard for Hybrid/NVDIMM. Samsung Netlist discussions ongoing for last 18 months.
- Recapping today, booting has worked on Large Memory Systems.
- 2 FPGA synch problem has been resolved.
- Indong Kim asking for more transparency from Netlist.
- Several timelines given on presentation, will forward when possible.
- Sebastian Lee stated we should have first samples in end of June, they expect to have internally in May.
- Netlist displayed their product roadmap for NV solutions.
- Partnered with AMD on NVDIMM-N launch. Also HyperDIMM reference design will be announced.
- Hardware solution has now been passed off to software team. Now eMMC recognized, stress testing underway.



- Next step is ES sample to Samsung, as mentioned in June.
- Indong was asked about competitive landscape, described mostly delay and Intel/Lenovo vs. Micron Quantex solutions.
- Indong stressed the SK Hynix and other ITC issues need to be resolved soon. Netlist stated trial to begin in May with resolution by October.
- Need to strive for standardization with JEDEC.

Thank you,

감사합니다

Neal Knuth

Samsung Semiconductor, INC

Southwest Regional Manager

New Office Number: 949 910 2835

[nealk@ssi.samsung.com](mailto:nealk@ssi.samsung.com)

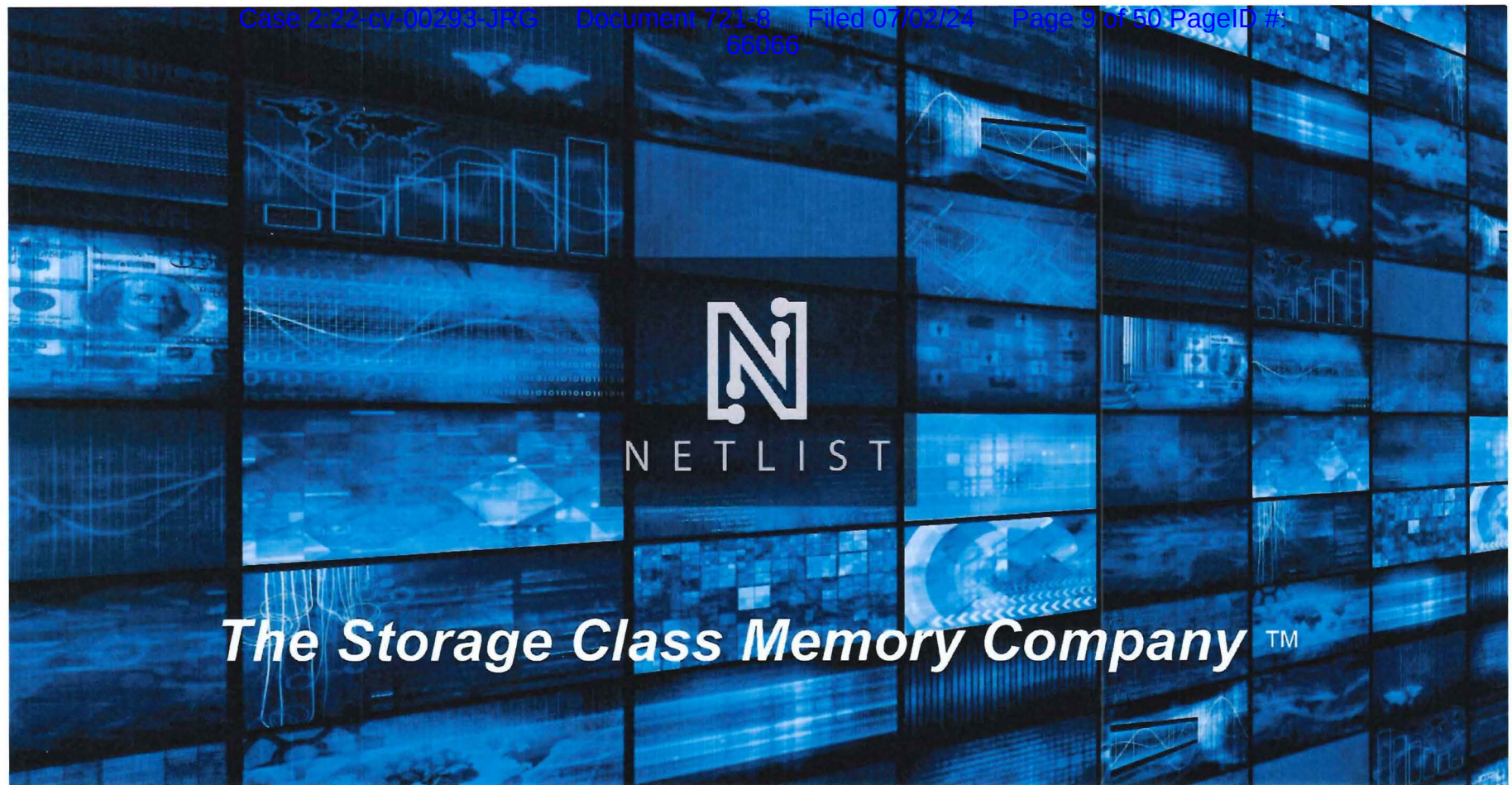
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Exhibit 519A.0007



## **Samsung-Netlist Partnership**

### **February, 2017**

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Exhibit 19A.0008

# COMPANY OVERVIEW

- Pioneer in DIMM architectures since 2000
  - Inventor of industry standard LRDIMM and NVDIMM
  - 100+ patents
  - Long-time custom DIMM supplier to global OEMs
- 5-year JDLA partnership, investment from Samsung Nov. 2015
- HybriDIMM (Storage Class Memory) Technology Announced Aug. 2016
- SK Hynix ITC patent litigation commenced Sep. 2016, trial May 2017

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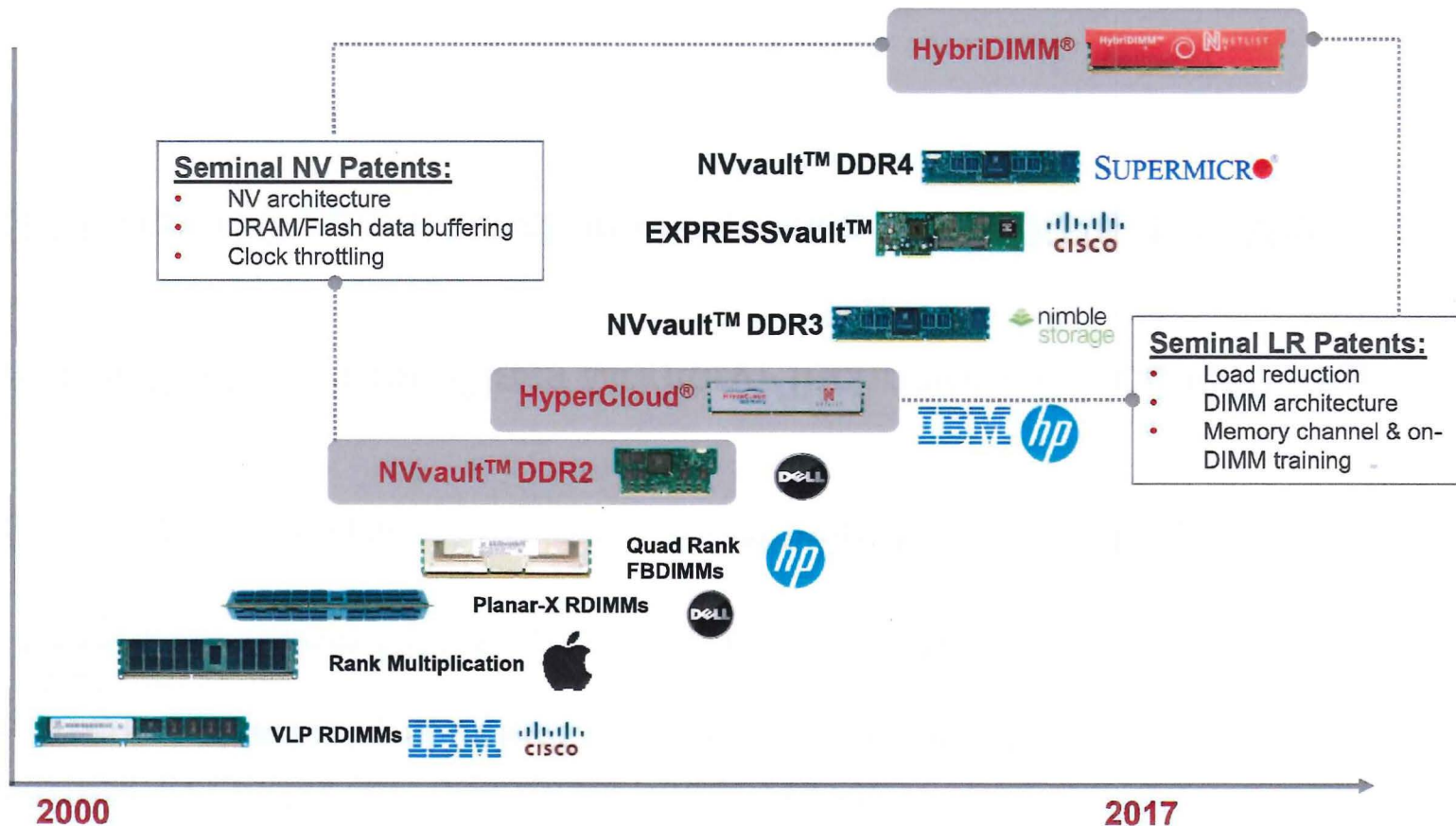
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Exhibit 519A.0009



# INNOVATION IN HIGH-PERFORMANCE MEMORY



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Exhibit 19A.0010

# LEADERSHIP TEAM

<b>Chuck Hong</b> CEO & Co-Founder (2000)	 
<b>Gail Sasaki</b> CFO (2006)	
<b>Brian Peterson</b> SVP Sales & Marketing (2015)	  
<b>Chris Lopes</b> VP Sales & Co-Founder (2000)	  
<b>Jibum Kim</b> EVP Asia Pacific Sales & Marketing (2015)	 
<b>Noel Whitley</b> VP Intellectual Property (2013)	
<b>Vahid Ordoubadian</b> VP Advanced Engineering (2015)	  
<b>Dr. Hyun Lee</b> VP & CTO (2007)	  

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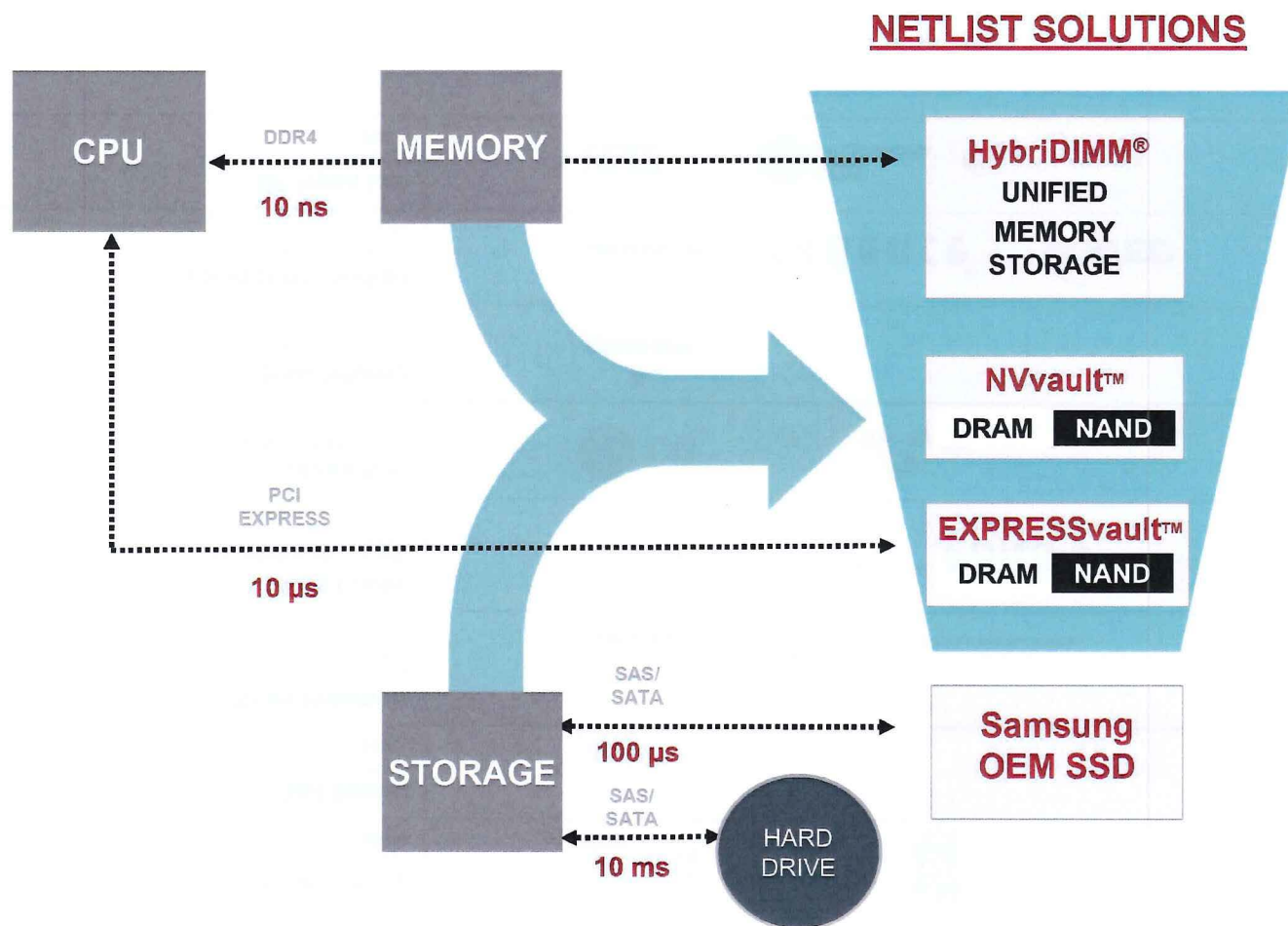
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Exhibit 519A.0011



# PIONEERING PRODUCTS FOR MEMORY - STORAGE CONVERGENCE



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Exhibit 19A.0012

# BASE PRODUCTS

## POSITIONED FOR NEAR-TERM GROWTH

### NVvault™



- DDR3 and DDR4 NVDIMM-N modules
- For industry standard server and storage systems
- Application acceleration and data protection
- Incorporates proprietary Vault controller IP

~\$350 million TAM <sup>(1)</sup>

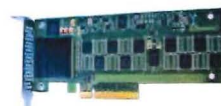
kaminario.

AMD



Pivot

### EXPRESSvault™



- PCI Express 3.0 plug-and-play memory card
- Designed for server and storage appliances
- Disaster recovery and write buffer acceleration
- 5x faster than SSDs in write environment

~\$100 million TAM <sup>(1)</sup>

inspur

Baidu 百度

NetApp™

<sup>(1)</sup> Management estimate.

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Exhibit 519A.0013



# HybriDIMM™

## FIRST PLUG & PLAY STORAGE CLASS MEMORY



- Industry's 1<sup>st</sup> "on-DIMM" intelligent co-processor
- TB capacity of low-cost NAND into the memory channel, and enables DRAM-like access speeds to NAND
  - ✓ 1000x faster than fastest storage solution today, at up to 80% lower cost
- DDR4 LRDIMM standard interface allows plug & play
- Concurrently block and byte addressable: applications can now access storage as if it was memory unlocking in-memory computing and big data analytics for the masses
- Sampling in 1H; volume production expected year-end

### Pre-Sight Technology

- Predictive algorithm ensures data is at the right place at the right time
- Eliminates SSD access penalty
- Allows memory and storage to reside in the DIMM channel concurrently



### Launch Partner Ecosystem



### Target Applications

IN-MEMORY  
COMPUTING



BIG DATA  
ANALYTICS



DATABASE  
SQL, NoSQL,  
OBJECT



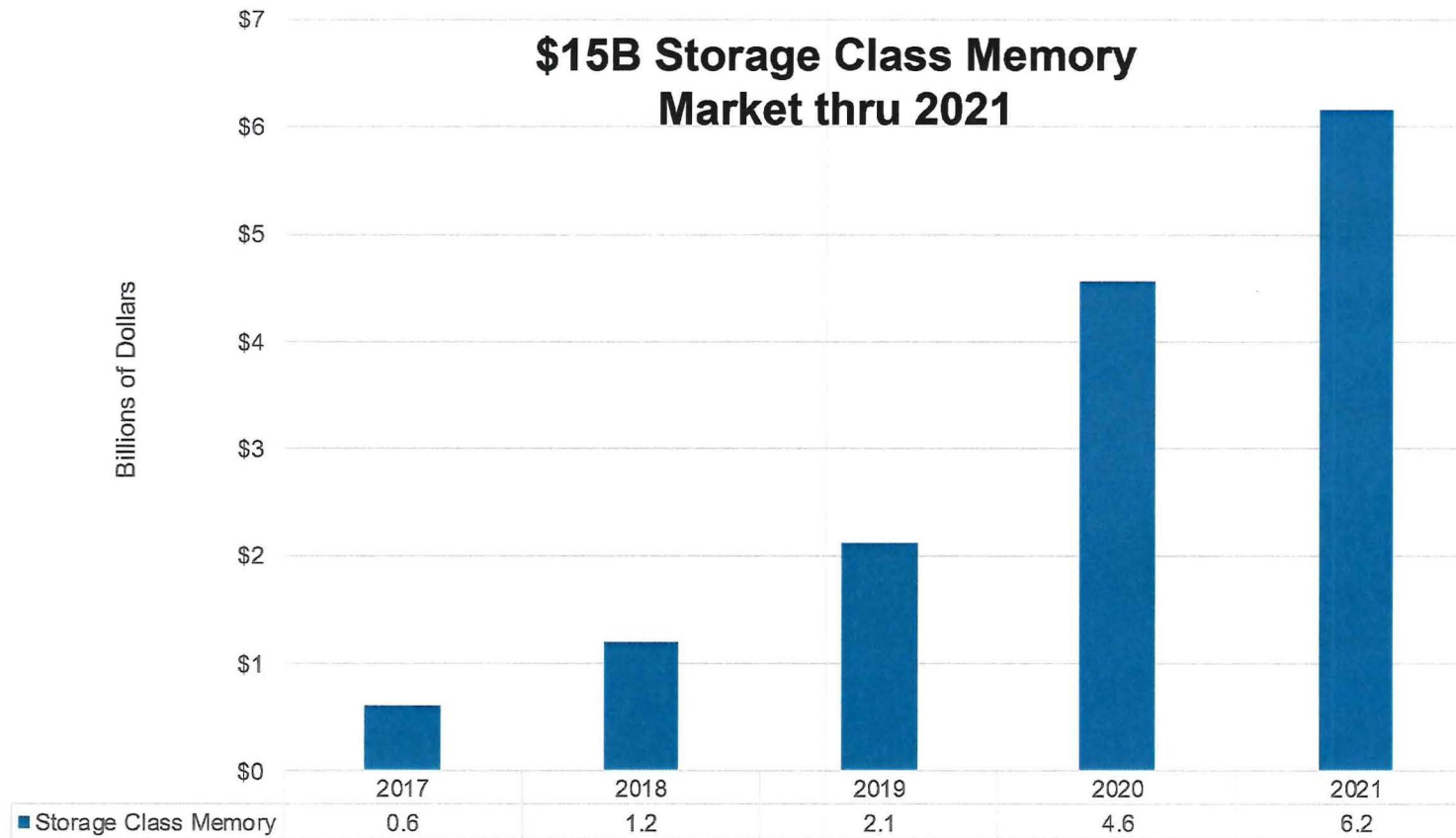
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# HybriDIMM™ ADDRESSABLE MARKET



Source: Objective Analysis, 2016.

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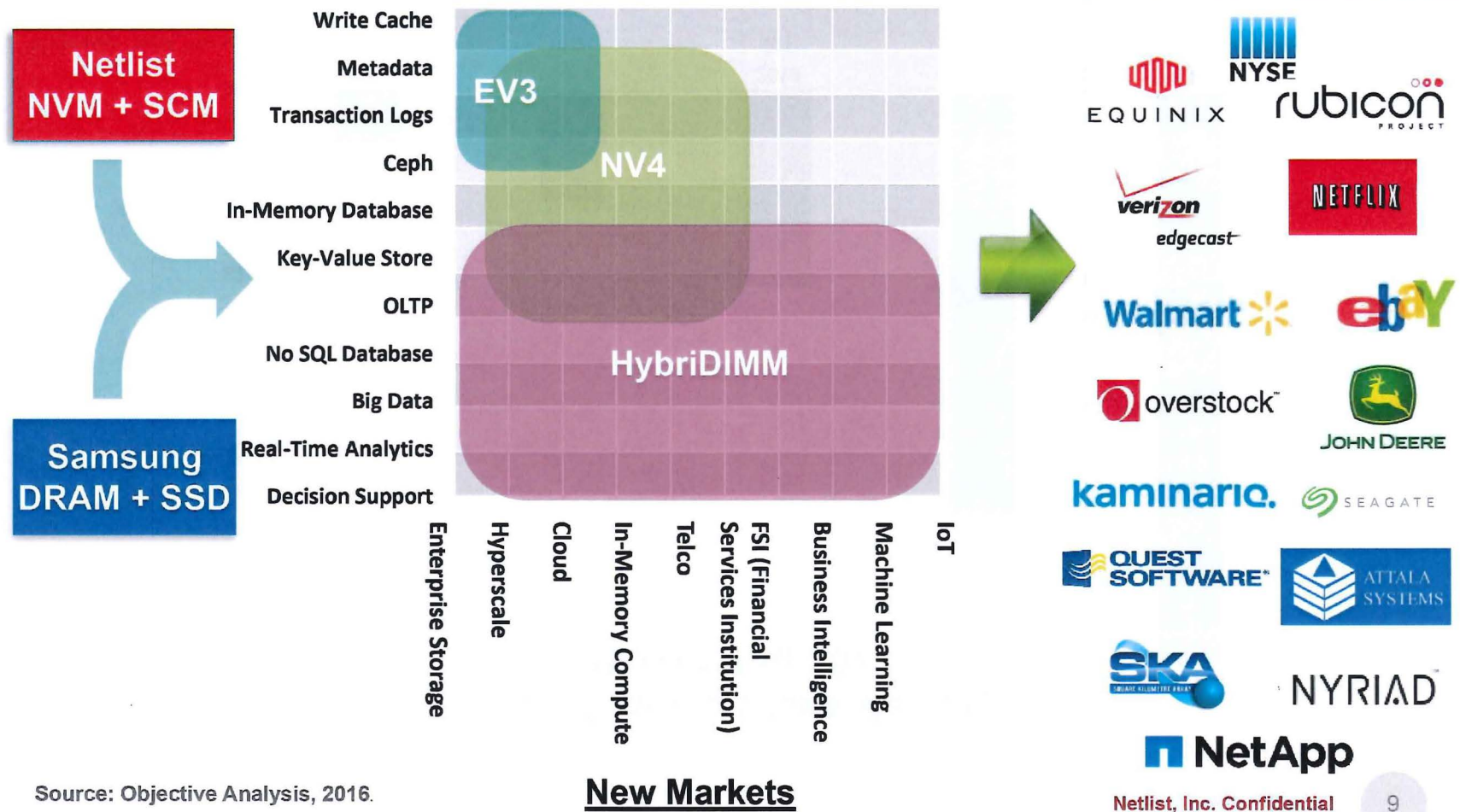
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Exhibit 519A.0015



# NEW MARKETS FOR NETLIST AND SAMSUNG



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Exhibit 19A.0016

# 15-YEAR SAMSUNG RELATIONSHIP

- \$200M+ purchase history beginning in 2001
  - ✓ DRAM & NAND components
  - ✓ NAND wafers
  - ✓ DIMMs
  - ✓ SSDs

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Exhibit 519A.0017

# STRATEGIC & FINANCIAL PARTNERSHIP

## SAMSUNG

### *5-Year Joint Development and Licensing Agreement*

- Partnership on Storage Class Memory (SCM) technology
- Netlist - one of select group with a license to all Samsung's patents
- Access to Samsung DRAM, NAND, SSDs at competitive-cost
- Samsung is Netlist's largest investor

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Exhibit 519A.0018



# NETLIST CUSTOMERS CREATE SAMSUNG SSD & DRAM HIGH-END OPPORTUNITIES



Netlist design-in work in high-end applications locks in Samsung SSD and DRAM products while locking out competition

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Exhibit 519A.0019



# CREATING LONG TERM SAMSUNG DEMANDS

- Extending Samsung reach to high-end customers
- Extensive qualifications result in inability to switch away from Samsung
- Creates consistent demand regardless of market conditions

## Automotive



## Data Center



## Storage



## Audio/Video



## Appliances / Government



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Exhibit 19A.0020

# CASE STUDIES: NETLIST ENABLED CUSTOMERS

## Uber ATC - Pittsburgh

- Autonomous vehicles & mapping
  - ✓ 1.92TB SSDs
- Experienced 40%+ failure rates with competitive supplier
- Netlist advised switch to OEM grade SSD - SM863
- Monthly technical meetings in PA to optimize customer use case with Samsung solution
- Netlist provided PM863a samples and driving customer to qualify – currently in test

## Riot Games - LA

- Online Gaming (League of Legends)
  - ✓ DIMMs, 2.5" & AIC SSDs
  - ✓ > 60% share of online gaming
  - ✓ > 200K installed server base
- Drove switch to Samsung products
  - ✓ Kingston RDIMMs
  - ✓ HGST SSDs (3TB)
- Evaluating PM1725 AIC (6TB) & qualifying 16/32GB RDIMMs
- Netlist enabling key take-away win

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Exhibit 519A.0021



# SALES CHANNEL COMPARISON

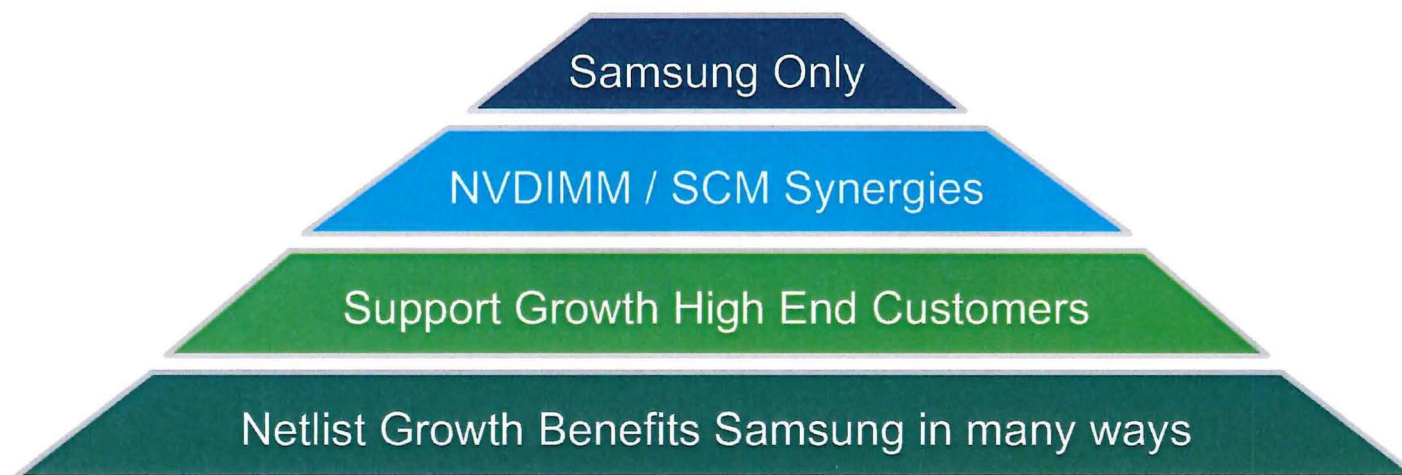
Value Provided	Netlist	Distribution	Manufacturer's Rep
<b>Samsung Products Only</b>	✓	✗	✗
Dedicated Samsung Product FAE with Pre & Post Support	✓	✗	✗
Create Samsung Qual Sockets	✓	✗	✓
Provide Samples within limited qual windows under long lead time of sample	✓	✗	✗
On-hand Inventory (Support for Non-Forecasted & Small Odd Lot Requirements)	✓	✓	✗
Deep Technical Engagement with Architects/Engineering on current and future products and designs	✓	✗	✗

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# NETLIST BRINGS UNIQUE VALUE TO SAMSUNG

## SAMSUNG



kaminario.

harmonic

mbx  
systems



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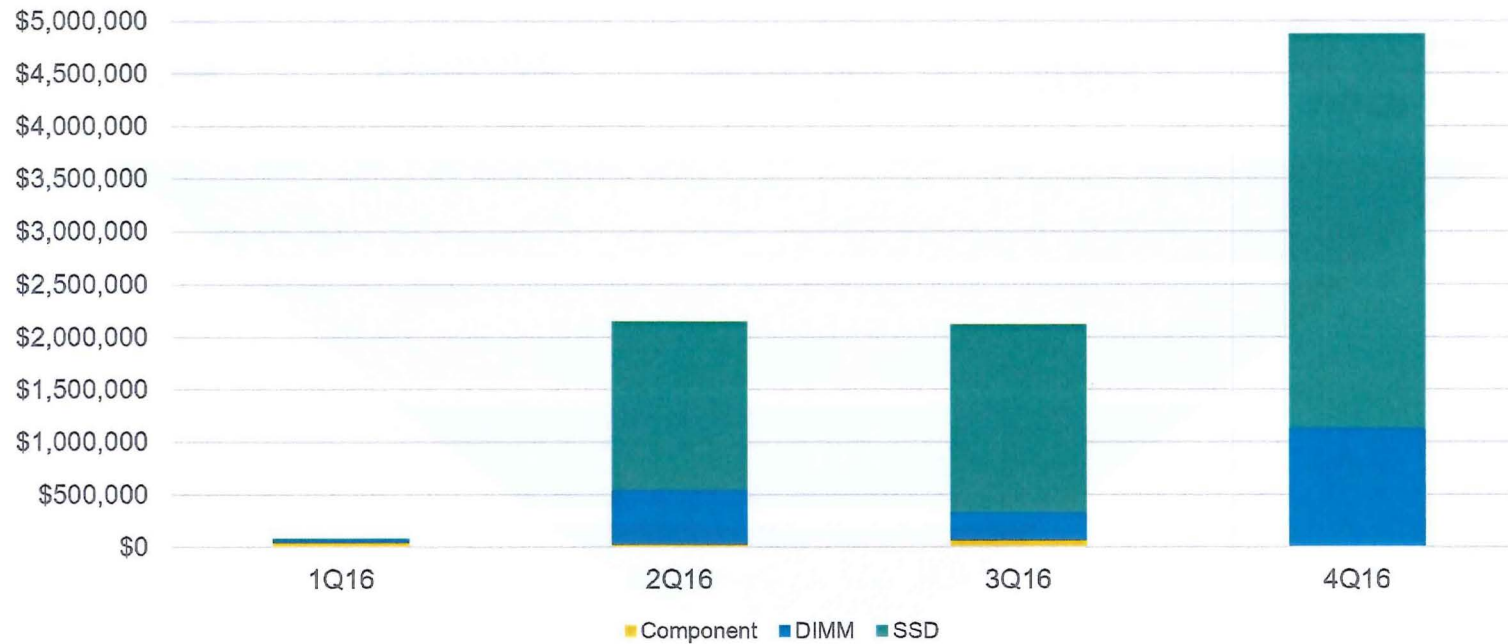
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Exhibit 519A.0023



# 2016 BUSINESS HISTORY

Netlist Purchase History



New customers and qualifications resulting in rapid and sustainable growth

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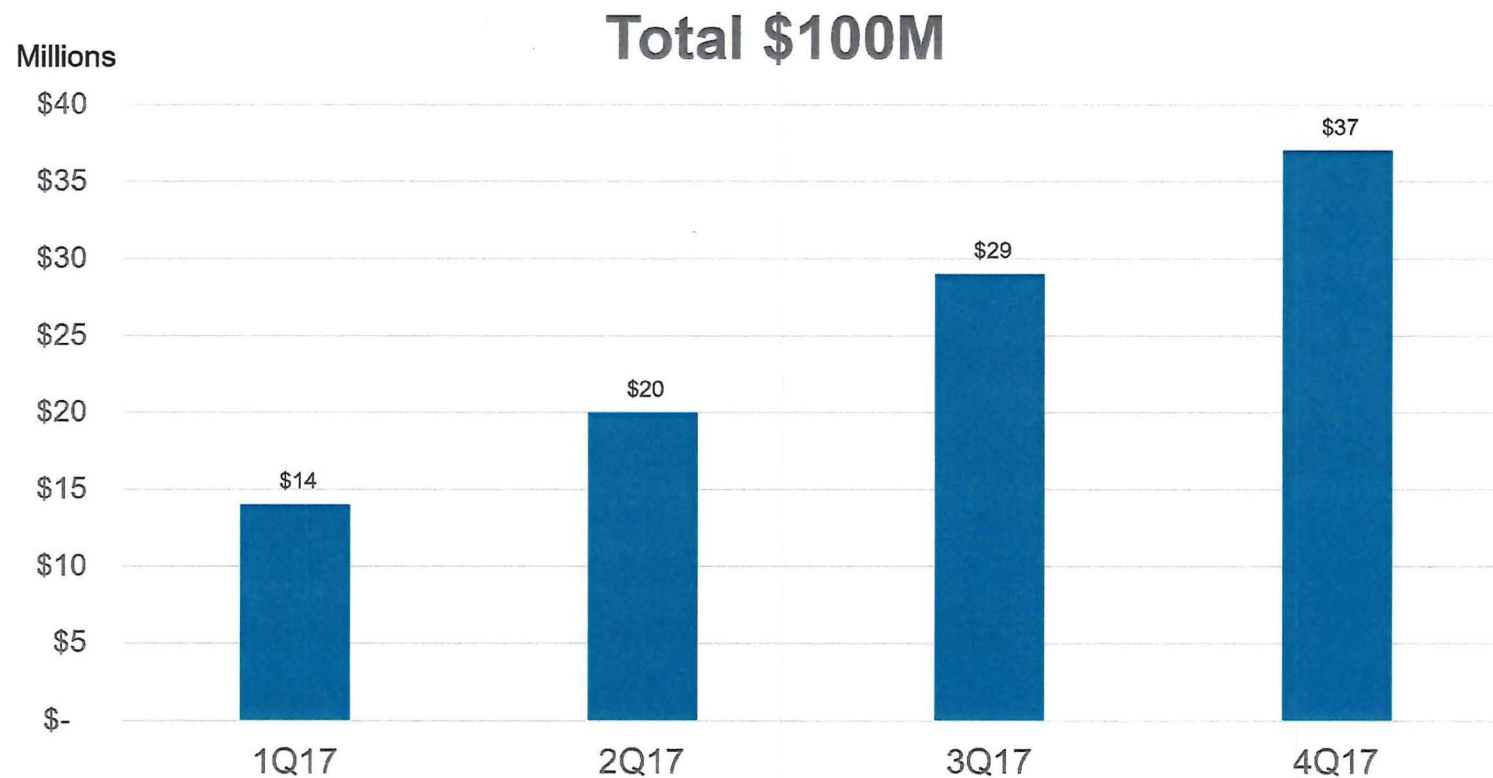
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Exhibit 19A.0024

# 2017 SALES PLAN – SAMSUNG PRODUCTS



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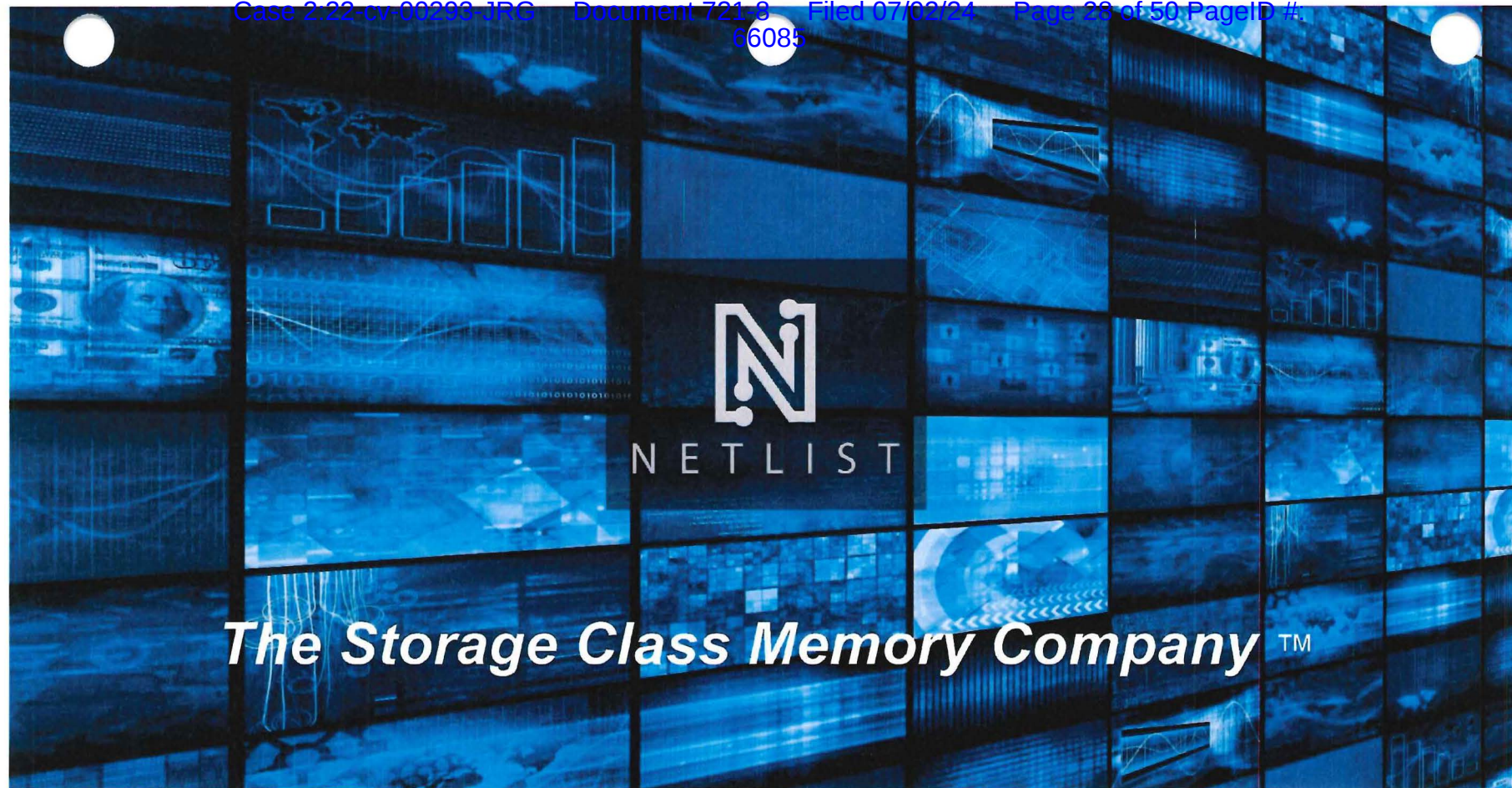
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Exhibit 519A.0025

# NETLIST – NEW PARTNER TYPE STRATEGIC DEVELOPMENT and DISTRIBUTION

- Required Samsung support for Netlist
  - Product allocation support
  - Vendor Managed Inventory (VMI)
  - OEM pricing
  - Referred business for small or unique customers
  - **Official Distributor-Partner Agreement**





**Samsung – Netlist**  
**HybriDIMM Program Review**  
February 21, 2017  
Hwasung, Korea

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Exhibit 519A.0027



# Agenda

- Samsung's view of SCM technology and market
- Netlist HybriDIMM Status Update
- Next Steps

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Exhibit 519A.0028

# HybriDIMM Timeline

Dec 2015	Aug 2016	Feb 2017
<ul style="list-style-type: none"> <li>• DDR3 LRDIMM 800MT/s</li> <li>• 8GB DRAM + 256GB NAND</li> <li>• 1 FPGA</li> <li>• Proprietary OS drivers and library</li> </ul>	<ul style="list-style-type: none"> <li>• DDR4 LRDIMM 1866 MT/s</li> <li>• 8GB DRAM + 256GB NAND</li> <li>• Added 2nd FPGA (higher SI)</li> <li>• Added PMEM support (drivers and library)</li> <li>• Implemented unified data path</li> <li>• Completed custom command processor</li> <li>• <b>HybriDIMM reveal at FMS demonstrating:</b> <ul style="list-style-type: none"> <li>○ <b>System boot without BIOS change</b></li> <li>○ <b>FPGA slave IO training &amp; calibration</b></li> <li>○ <b>Data move between DRAM and FPGA</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• DDR4 LRDIMM 1866 MT/s</li> <li>• 8GB DRAM + 256GB NAND</li> <li>• <b>AppDirect API alpha released</b></li> <li>• <b>PreSight™ technology basic write functionality</b></li> <li>• <b>JEDEC compliance testing underway</b></li> </ul>

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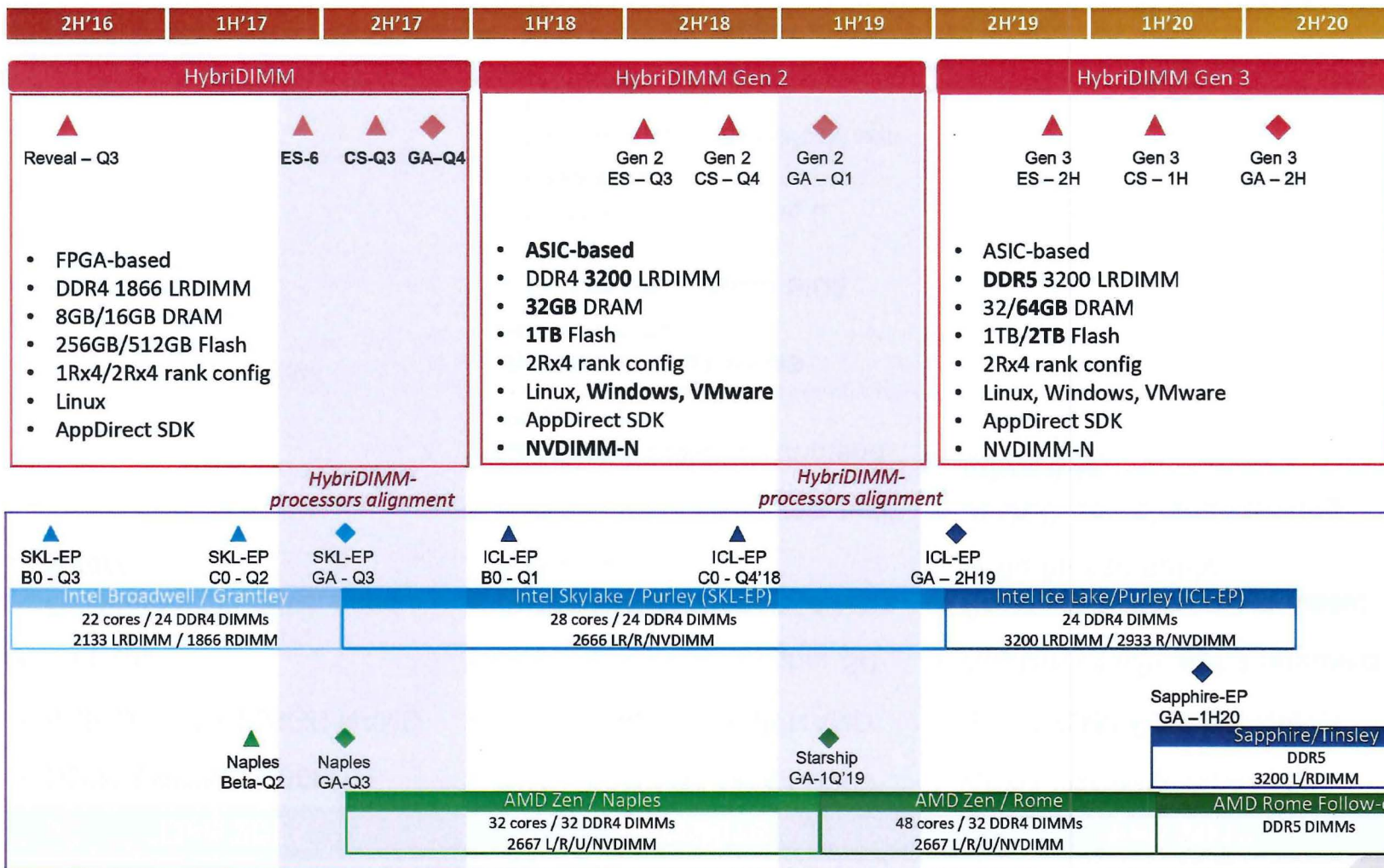
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Exhibit 519A.0029



# HybriDIMM Product Roadmap



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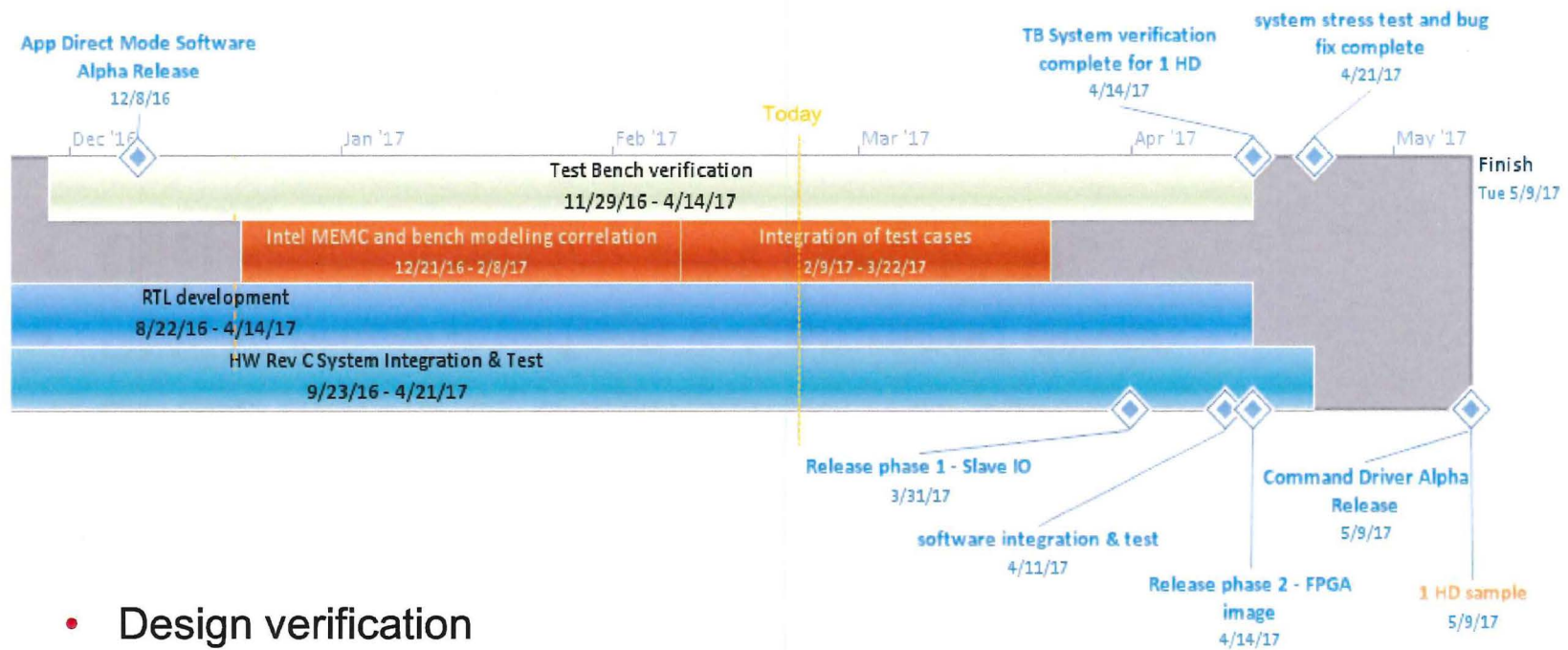
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SEC008174  
SAM-NET00551009

0519.30

Exhibit 19A.0030

# High-level Hardware Development Schedule



- Design verification
- FPGA RTL
- DIMM Design

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SAM-NET00551010  
0519.31

Exhibit 519A.0031



## Current Status

- Hardware (working DIMM) released to Software team
- System recognizes Storage (eMMC) capacity
- eMMC IP optimization for full performance
- Software driver work done over the past 12 months
- Stress testing of Command driver connection w DIMM
- PMEM driver interface w Command driver
- User space interface work using NVML

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SAM-NET00551011  
0519.32

Exhibit 19A.0032

## Next Steps

- ES Release in June 2017
  - ✓ Provide ES to Samsung
  - ✓ Provide Performance Data
  - ✓ Hold follow-up technical meeting
- Samsung requests and expectations from Netlist

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SEC008177  
SAM-NET00551012  
0519.33

Exhibit 519A.0033

## Message

**From:** Neal Knuth [n.knuth@samsung.com]  
**Sent:** 2/21/2017 5:21:41 PM  
**To:** Howard Sung [hwanam.sung@samsung.com]; Yejin Moon [yejin.moon@samsung.com]; Daniel (Kyong Yong) Lee-mySingle [ky1217.lee@samsung.com]; Harrison Yoo [hsang.yoo@samsung.com]  
**CC:** Steven Metz [s.metz@samsung.com]; Lane Kim [kihoon74.kim@samsung.com]  
**Subject:** Netlist DSK Visit Feburary 21, 2017

Howard,

Harrison just translated what was said on two key topics that were discussed in Korean. I edited below. Any other feedback?

Thanks,

Neal Knuth  
949 910 2835

---

**From:** Neal Knuth  
**Sent:** Monday, February 20, 2017 11:35 PM  
**To:** Howard Sung; Yejin Moon; Daniel (Kyong Yong) Lee-mySingle; Harrison Yoo  
**Cc:** Steven Metz; Lane Kim  
**Subject:** Netlist DSK Visit Feburary 21, 2017

Thanks Howard for the Samsung presentations.

I will send off to Netlist after we get their presentations (both Technical and Sales have been requested). Until I get, here are my first pass of notes without the overviews (it was difficult to read what was on the Netlist presentations). Also, as so much Korean was spoken for some topics, I hope someone can add to the below (including SEC attendees as both groups were quite large).

Please help distribute as needed within SEC after adding Team's comments or editing. (I did not copy DS).

**Sales Portion**

**Netlist Attendees:**

Paik Ki Hong VP WW Operations  
Brian Anderson VP Sales  
JB Kim VP Sales  
Sebastian Lee Director Engineering

**Samsung Attendees:**

Dong Sung Yang  
Daniel Lee  
Harrison Yoo  
Kate Moon  
Hyoungseok Kwon  
Jaehyung Park  
Younggyun Lee  
Neal Knuth

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SEC008178  
SAM-NET00551013  
0519.34

Exhibit 519A.0034



**Technical:**

Indong Kim  
Benjamin Lim  
KC Roo  
Kate Moon  
Neal Knuth

**Netlist Sales Overview** (will attach when have)

- Brain Peterson presented Netlist overview, discussing his responsibility on North America and EU sales while JB Kim handles Asia Pacific.
- Netlist described 17 years of DRAM development and invention, which includes over 100 patents in DRAM technology.
- Netlist was a pioneer in the development of DRAM, including patents on LRDIMM, VLP and NVDIMM.
- Discussed the JDLA signed with Samsung in November of 2015 which is active for 5 years.
- Hybrid DIMM announced publicly in August of 2016, expanding Netlist Patents.
- Discussed ITC litigation against SK Hynix. Trial to begin in May, with resolution by October 2017.
- Netlist first company to develop NV function in support of Dell.
- Hypercloud product was first LRIDMM in industry.
- Netlist Solutions and Offerings include a:
  - PCI Offering
  - NVDIMM
  - HyperDIMM
- These solutions and customer discussions lead naturally into Samsung Storage Solutions including DRAM and SSD (finished products) besides using components in their actual products above.
  - Typical DRAM Netlist solutions consists of 18-36 x4 8Gb D4 components along with 10-20 256Gb/32GB eMMC.
- Netlist main revenue driver today is a PCI express card that is plug and play along with finished Samsung solutions. Offering mainly 8GB and 16GB today.
- NVDIMM market continues to be delayed, weak demand, competing solutions yet to be proven from companies like Smart and Micron.
- NV VAULT is Netlist brand of NVDIMM-P.
- With the JDLA, and strategic partnership, Samsung is the single largest investor in Netlist.
- One stop solution for Samsung customers with NV/EV along with Samsung Finished SSD and DRAM.
- There was a very long discussion of Uber in Korean, and DongSung Yang clearly stated our intention was to follow the customer direction, whatever channel that may be (Direct or through Netlist or others).
- Netlist positioned themselves as a Dedicated Sales Channel to Samsung vs. the Disti and Rep networks.
  - Synergistic sales and dedicated to Samsung products.
- Netlist showed 2016 Samsung purchases to be 9M, over ½ in Q4 (~5M)
- Netlist showed a purchase forecast for 2017 of \$100M from Samsung (neither credit line or PA can support). DongSung was sure to point out anyone could achieve this in current market. This 100M was not broken out by customer, product, or sales strategy, seemed arbitrary forecast.

**At the end of Netlist presentation, these were the Asks from Netlist:**

1. Better product support and allocation to achieve 2017 goal.
2. Vendor Managed Inventory (VMI), this request was ignored obviously.
3. OEM Pricing
4. Referral of small customers to Netlist for support, stock, etc.
5. Official Distribution Partner Agreement, this became a heated topic as DongSung described our current structure. Netlist has brought this up in the past and all requests have been denied. This discussion also went on in



Korean for a while. DongSung also let Netlist know that the JDLA is clearly focused on Technology, and is not an avenue to support Netlist with standard products. This should be separate and handled on the business not executive levels.

**Samsung Presented:**

- Flash Market Overview (as time was over, this was brief). Jaehyung Park
- DRAM Market Overview Younggyun Lee
- 32GB price discussion ended the meeting.

Lunch at Japanese Restaurant.

**Prior Meeting was Technical Update for progress of NVDIMM (will attach Netlist presentation when available)**

**Key Takeaways:**

- Need JEDEC standard for Hybrid/NVDIMM. Samsung Netlist discussions ongoing for last 18 months.
- Recapping today, booting has worked on Large Memory Systems.
- 2 FPGA synch problem has been resolved.
- Indong Kim asking for more transparency from Netlist.
- Several timelines given on presentation, will forward when possible.
- Sebastian Lee stated we should have first samples in end of June, they expect to have internally in May.
- Netlist displayed their product roadmap for NV solutions.
- Partnered with AMD on NVDIMM-N launch. Also HyperDIMM reference design will be announced.
- Hardware solution has now been passed off to software team. Now eMMC recognized, stress testing underway.
- Next step is ES sample to Samsung, as mentioned in June.
- Indong was asked about competitive landscape, described mostly delay and Intel/Lenovo vs. Micron Quantex solutions.
- Indong stressed the SK Hynix and other ITC issues need to be resolved soon. Netlist stated trial to begin in May with resolution by October.
- Need to strive for standardization with JEDEC.

Thank you,

감사합니다

Neal Knuth

Samsung Semiconductor, INC

Southwest Regional Manager

**New Office Number: 949 910 2835**

[nealk@ssi.samsung.com](mailto:nealk@ssi.samsung.com)

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SEC008180  
SAM-NET00551015  
0519.36

Exhibit 519A.0036

## Message

**From:** Howard Sung [hwanam.sung@samsung.com]  
**Sent:** 2/21/2017 8:11:12 AM  
**To:** Neal Knuth [n.knuth@samsung.com]  
**Subject:** PPT(Netlist Meeting)  
**Attachments:** Netlist \_ Samsung 022117\_rev.pptx

Hi Neal,

When Dram material is updated, I will re-send the PPT

감사합니다.

Howard SUNG  
(NWSA: Qualcomm)  
+82-31-208-4327  
+82-10-7727-1868



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Exhibit 519A.0037

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# Netlist – Samsung Executive meeting

Feb 21<sup>st</sup> , 2017 | Memory Division | Samsung Electronics Co.,Ltd

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SEC008182  
SAM-NET00551017  
0519.38

Exhibit 519A.0038



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# Attendees

■ **Date & Time: Feb 21st, 2017(Tue.), 09:15 – 11:45**

■ **Place: @ Hwasung, Korea(Room #108)**



J.B. Kim  
Brian Peterson  
Paik Ki Hong  
Sebastian Lee

EVP of Asia Pacific Sales and Strategic Biz  
SVP of Sales and Marketing  
VP of Operation  
Director of Engineering



Dongsung Yang  
Indong Kim  
Daniel Lee  
Harrison Yoo  
Kate Moon  
Neal Knuth

VP, Sales group 1  
Principal Engineer, Product planning  
Dir, Sales group 1  
Dir, Sales group 1  
Dir, Sales group 1  
Sr. Manager, DSA West2 Sales

SAMSUNG

2

Time table	
Time	Subject
09:15 ~ 10:20	- Engineering Meeting
10:20 ~ 10:30	- Break Time
10:30 ~ 11:45	- Sales Meeting
11:45 ~	- Lunch
SAMSUNG	



\* Version : 22.0

\* Subject : Strategy Marketing Team Org

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0519.41

Exhibit 519A.0041



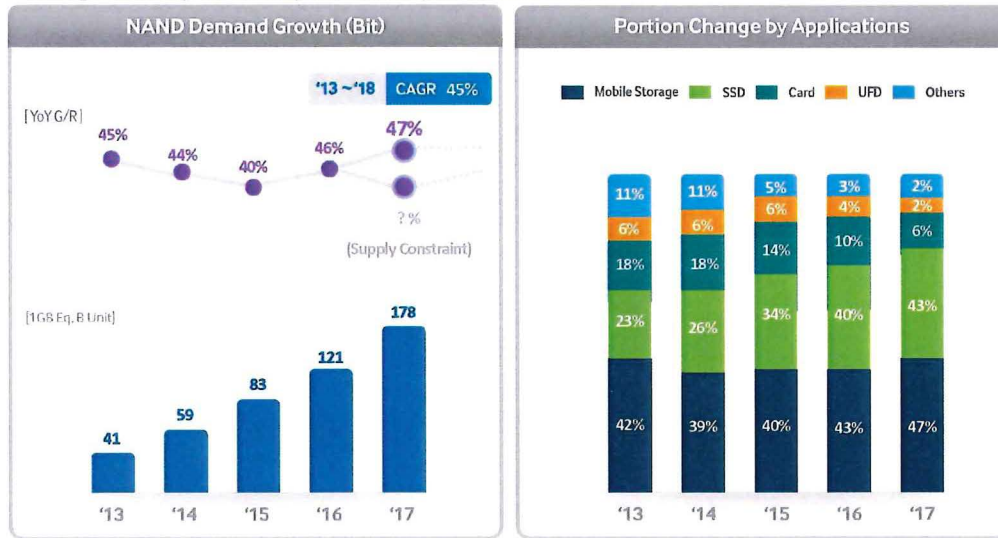


## NAND Demand Growth and Applications

Proprietary

### ■ SSD and mobile storage are leading demand growth

- SSD adoption increasing with higher density NVMe (256/512GB) and SAS (8/16TB)
- Higher density 256GB adoption in smartphones will accelerate



\*Source: Samsung

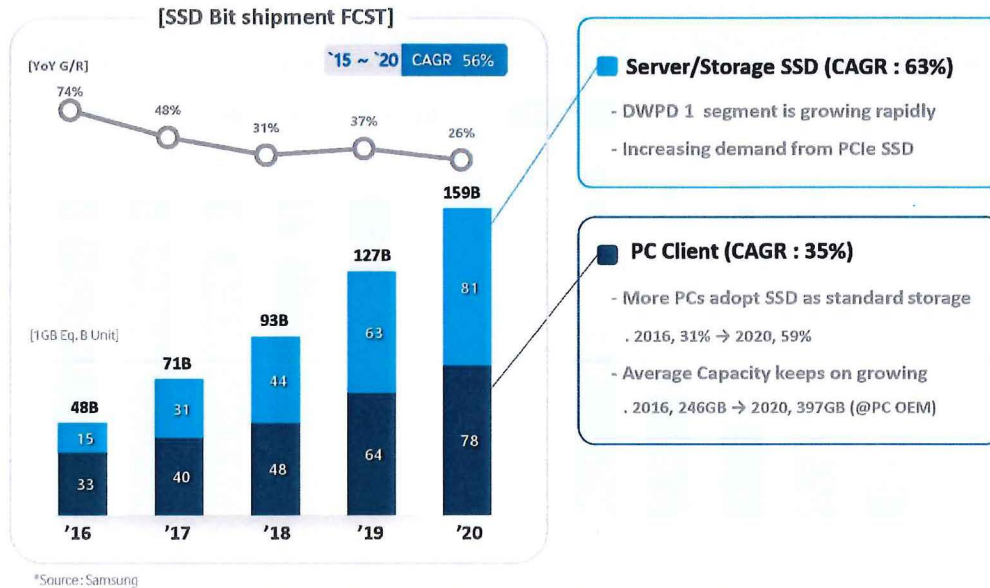
SAMSUNG

6 / 11

## SSD Market Forecast

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### ■ SSD : The Fastest Growing application in NAND (CAGR 56%)



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0519.44

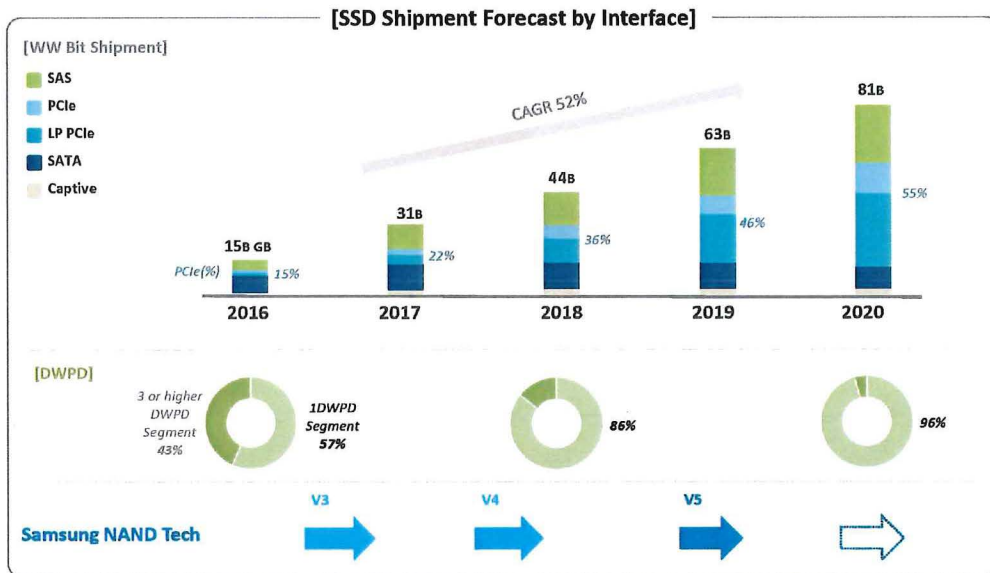
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## Server/Storage SSD Market Forecast

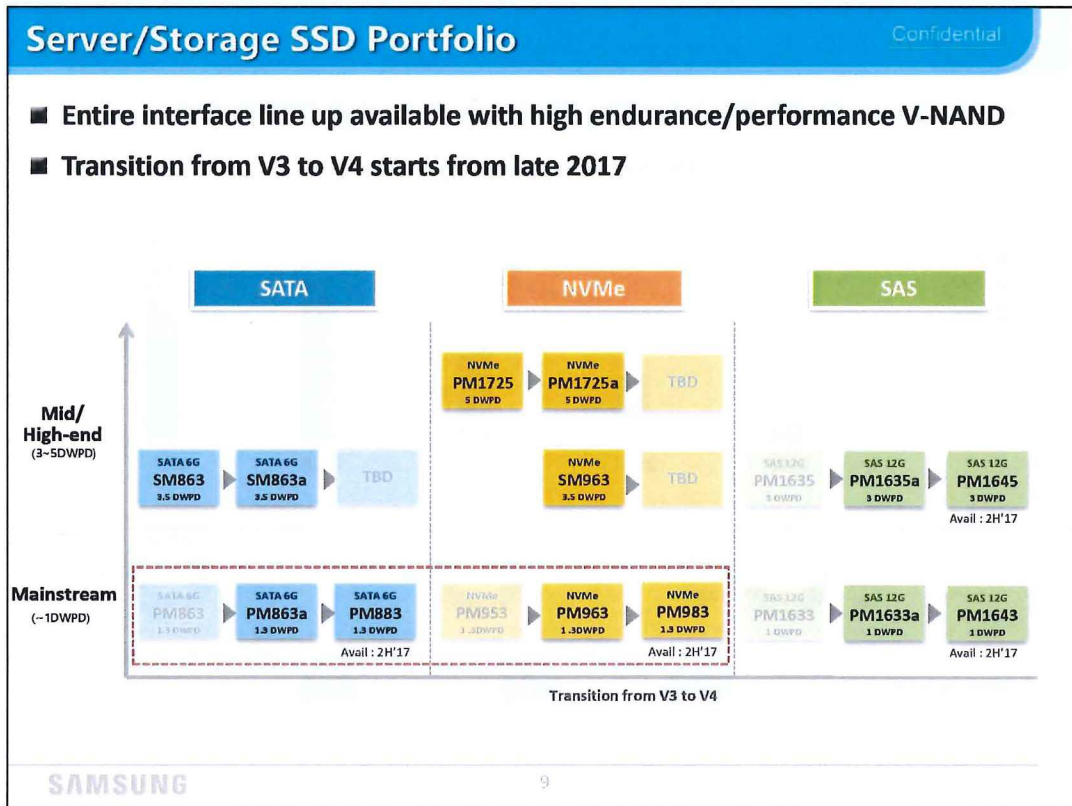
Confidential

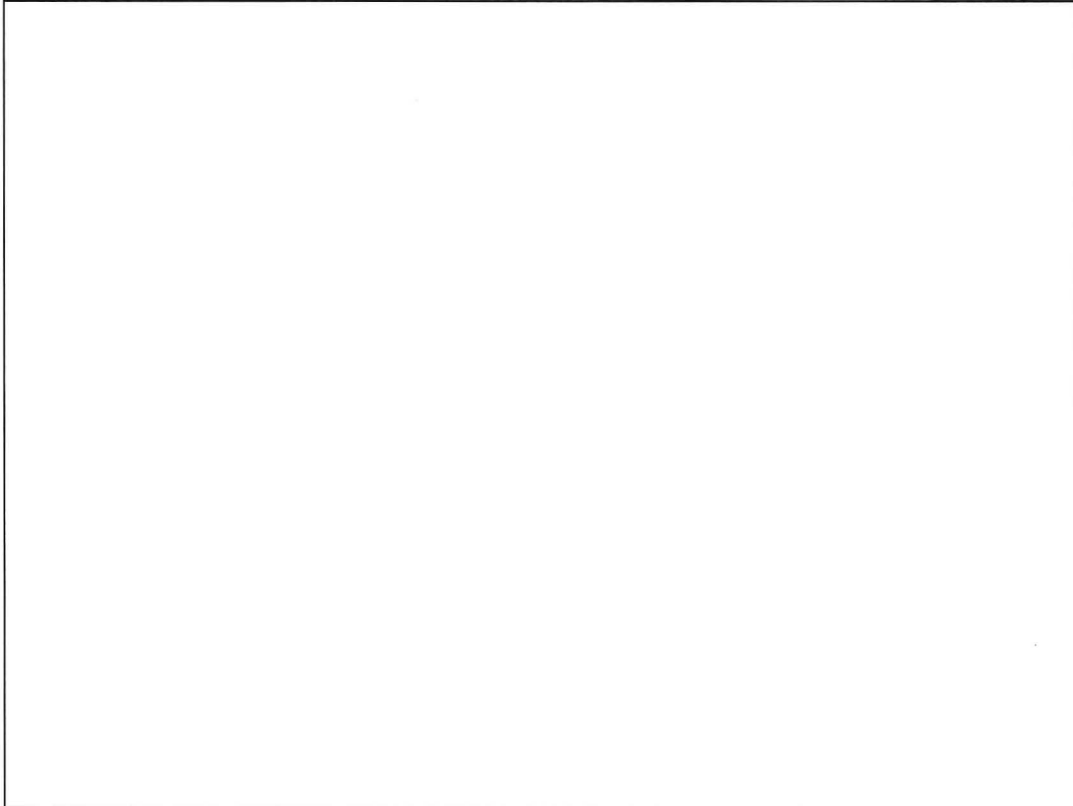
### ■ NVMe & Low DWPD SSD is leading the Server & Storage SSD Market



\*Source: Samsung

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SEC008191  
SAM-NET00551026  
0519.47

Exhibit 519A.0047



